

REMARKS/ARGUMENTS

These remarks are submitted in response to the final Office Action of May 1, 2007 (hereinafter Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. Nonetheless, the Examiner is expressly authorized to charge any deficiencies or credit any overpayments to Deposit Account No. 50-0951.

In the Office Action, Claims 1-19 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Published Patent Application 2004/0146021 to Fors, *et al.* (hereinafter Fors). Claims 20-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fors, in view of U.S. Published Patent Application 2005/0286501 to Higuchi (hereinafter Higuchi).

Applicants have amended Claims 1, 7, 11, 15, and 19 to further emphasize certain aspects of Applicants' invention. Applicants also have amended dependent Claim 20 to maintain consistency among the claims. As discussed herein, the amendments are fully supported throughout the Specification. No new matter has been introduced by this amendment.

Aspects Of Applicants' Invention

Prior to addressing the cited references, it may be useful to reiterate certain aspects of Applicants' invention. One embodiment of the invention, as exemplified by amended Claim 1, is a gateway serving as an interface between a mobile network and a wireless network. The gateway can interface with a mobile switching center of the mobile network and can be configured to appear as an additional mobile data base station of the mobile network. In operation, when a mobile device accesses a wireless network coupled to the gateway, the gateway can utilize a handoff operation of the wireless network to prompt the mobile switching center to handoff a communication with a mobile device from the mobile data base station currently handling the communication to the wireless

network. In particular, the gateway – responsive to receiving a SIP invite message from the mobile device – sends a signal to the mobile switching center, indicating a heightened signal strength to prompt the mobile switching center to handoff the call to the gateway. (See, e.g., Specification, para. [0042]-[0043].)

The mobile device can be configured to prompt or expedite the handoff. In particular, the mobile device can be configured to access a wireless network and establish a connection with the gateway. The mobile device can transmit a SIP invite message to the gateway informing the gateway that the mobile device will begin transmitting communication signals at a lower power. Upon sending the SIP invite, the mobile device can reduce transmit power for sending the communication signals to a mobile data base station currently handling the call on the mobile network. In particular, the mobile device can transmit communication signals at a reduced power level to produce weakened signals, which prompts the mobile switching center to search for other mobile data base switching station having a greater signal strength. The gateway, being already configured to appear as an additional mobile data base station, can, in response to receiving the SIP invite, provide a heightened signal strength indicator with a predetermined value to prompt the mobile switching center to hand off the call to the gateway. (See, e.g., Specification, para.[0037] and para. [0042].)

The Claims Define Over The Cited References

As already noted, independent Claims 1, 7, 11, 15, and 19 were each rejected as being anticipated by Fors. Fors is directed to an apparatus and method for effecting the "handoff [of calls] from a cellular wireless network to a non-cellular wireless network," such as a wireless local network (WLAN). (Paragraph [0015]; see also Abstract, lines 1-5.) In particular, the access gateway disclosed in Fors provides information to a mobile subscriber so that the gateway can initiate a handoff through the serving cellular network. Fors discloses that a hand-off target can be either a "spoof" value or a valid cell identifier that will be recognized as a trigger for handoff to the non-cellular network. (See, e.g.,

para. [0030].) Fors also discloses using an artificial signal strength message to trigger a hand-off determination. (See, e.g., paragraph [031].) Accordingly, Fors requires artificially configured actions of the mobile device to spoof a signal strength message.

Applicants respectfully assert that Fors fails to expressly or inherently teach every feature recited in independent Claims 1, 7, 11, 15, and 19. For example, Fors fails to disclose a mobile device that sends a SIP invite message to a gateway to inform the gateway that the mobile device will be transmitting communication signals at reduced power. Fors further fails to teach a mobile device that transmits communication signals at reduced power to the mobile network to produce weakened signals to trigger a hand-off condition from the mobile switching center to the gateway. Instead, Fors requires that the mobile network be specially configured to “spoof” a signal strength measure to operate with a gateway to initiate the transfer. Furthermore, Fors does not teach a gateway that responsive to receiving a SIP invite message from the mobile device heightens a signal strength indicator associated with the mobile device for routing the call to the gateway. In particular, Fors does not contemplate first sending a SIP invite message to inform the gateway of an intended handover, followed by a lowering of a transmit power on the mobile device to trigger a handover to the gateway such that the gateway is aware of the mobile device actions in view of the SIP invite.

The present invention requires that only the mobile device and the gateway be specially configured. In particular, the present invention relies on an automatic handoff operation of a call from one mobile data base station (MDBS) to another based on a signal provided to the mobile network indicative of an “actual” signal strength of the mobile device. As described in Applicants’ Specification, the mobile device can lower the transmission power used to transmit communication signals to the mobile network, or otherwise attenuate signals being sent to the mobile network. By contrast, a spoofed signal strength measure as disclosed by Fors is not indicative of the actual signal strength levels of the mobile device. With Applicants’ invention, in response to the weakened communication signals, the mobile switching center, having identified the gateway as

another MDBS, can hand-off the call from the mobile network to the wireless network. The gateway can be configured to send a fabricated signal strength indicator to the mobile switching center, so that the mobile switching center identifies the gateway as the preferred path and routes the call to the gateway.

On Page 6 of the Office Action, with regard to Claim 19, it was stated that Fors teaches lowering a transmission power to a mobile device, identifying a system available to handle communication with said mobile device, and indicating to the mobile network that a heightened signal strength has been received from the mobile device for prompting the mobile network to handoff the gateway for providing connectivity between the mobile device and access point. Applicants' respectfully disagree.

Although Fors discloses performing signal strength measurements, "spoofing" signal strength measurements, and generating "artificial" signal strength values to trigger a hand-off, Fors does not expressly or inherently teach lowering a transmission power of the mobile device. Such action is distinguishably different from "spoofing" a signal strength message. Moreover, lowering the power of the signal strength transmissions can have consequences which Fors does not contemplate. Fors does not contemplate lowering a transmission power of the mobile device or take into account the operative aspects associated with lowering a transmission power.

On page 6 of the Office Action, with regard to Claim 20, it was stated that Fors teaches sending an invite through a wireless network to an IP network. It was also stated that although Fors does not disclose a SIP server, it would be obvious in view of Higuchi to include a SIP server, the asserted motivation being so as to improve voice quality by reducing delays in the transmission of voice IP packets even when there is an increase in IP communication traffic

With Applicants' invention, the mobile device sends a SIP invite message to the gateway to inform the gateway that the mobile device intends to lower the transmit signal power to trigger a hand-over. The SIP invite is not used to improve a voice quality. The sending of the SIP invite is an action performed by the mobile device in anticipation of

the consequences associated with lowering a transmit signal power, which can include poor signal quality or communication link reception. The SIP invite is sent to a gateway to inform the gateway that the mobile device intends to lower transmit power to trigger a handover. In response to receiving the SIP invite from the mobile device, the gateway sends a heightened signal to the mobile switching center to direct the handover to the gateway. The SIP invite is sent prior to lowering the transmission power so that the gateway is more certain of receiving the SIP invite. That is, the mobile device transmits the SIP invite when the transmit power is high, to minimize any transmission errors associated with reduced power transmission. This action is performed to ensure the gateway first receives the SIP invite, before lowering the transmit power to signal a hand-off. In this respect, a predetermined communication plan is established between the mobile device and the gateway prior to a hand-off condition.

Neither Higuchi nor Fors contemplates sending a SIP invite from the mobile device to the gateway to inform the gateway of the mobile device's intention to lower the transmission power for causing a hand-over. With Applicants' invention, the SIP invite prepares the gateway to send a heightened signal strength indicator responsive to detecting the anticipated lower power transmissions from the mobile device. Both Higuchi and Fors fail to contemplate a gateway that upon receipt of the SIP invite heightens a signal strength indicator to the mobile switching center responsive to receiving the SIP invite or receiving an indication of lower power transmissions from the mobile device. With Applicants' invention, the SIP invite establishes a correspondence for an intended course of action (e.g., to trigger a handover) between the mobile device and the gateway. None of these features are taught or suggested by either Higuchi or Fors.

Accordingly, Higuchi and Fors, alone and in combination, fail to teach or suggest every feature recited in independent Claims 1, 7, 11, 15, and 19, as amended. Applicants respectfully submit, therefore, that amended Claims 1, 7, 11, 15, and 19 define over the prior art. Applicants further respectfully submit that, whereas each of the remaining

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claims depends from Claim 1, 7, 11, 15, or 19, these dependent claims likewise define over the prior art.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

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Respectfully submitted,



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